

II. Amendment

Applicants amend claims 8–9 and 11–14 and add new claims 15–21, as set forth below in a listing of all of the claims in the application, with the status of each claim noted parenthetically, in accordance with 37 C.F.R. §1.121. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

Claims 1–7. canceled.

Claim 8. (currently amended) A suspension of one or more phosphate calcium salts, fluoride calcium salts, or fluorophosphate calcium salts in a liquid medium in which the salts are less than 1 g/l soluble, wherein the calcium salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, stabilized against agglomeration by a content of at least 0.01% by weight, based on the weight of the suspension, of a water-soluble surfactant or of a natural water-soluble polymeric protective colloid selected from the group consisting of gelatin, casein, albumin, starch, plant gums, water-soluble derivatives of water-insoluble natural polymeric substances, cellulose ethers, methylcellulose, hydroxyethylcellulose, carboxymethylcellulose, hydroxethylstarch and hydroxypropylguar, adsorbed onto said particles.

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- Claim 9. (currently amended) A suspension comprising 1% to 40% by weight of one or more phosphate calcium salts, fluoride calcium salts or fluorophosphate calcium salts in a liquid medium in which the salts are less than 1 g/l soluble, wherein the calcium salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, said particles stabilized against agglomeration by a content of 0.1% to 10% by weight, based on the weight of the one or more calcium salts, of a water-soluble surfactant or a natural water-soluble polymeric protective colloid selected from the group consisting of gelatin, casein, albumin, starch, plant gums, water-soluble derivatives of water-insoluble natural polymeric substances, cellulose ethers, methylcellulose, hydroxyethylcellulose, carboxymethylcellulose, hydroxethylstarch and hydroxypropylguar, adsorbed onto said particles.
- Claim 10. (previously presented) The suspension of claim 9, wherein the water-soluble surfactant comprises one or more non-ionic surfactants, the suspension comprising 1% to 10% by weight, based on the weight of the one or more calcium salts, of the one or more nonionic surfactants.

Claim 11. (currently amended) A process for the preparation of a suspension of poorly soluble calcium salts, comprising the steps of precipitating one or more phosphate calcium salts, fluoride calcium salts, or fluorophosphate calcium salts in an aqueous medium in which these salts are less than 1 g/l soluble, wherein the calcium salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, said precipitation being carried out in the presence of water-soluble surfactants or natural water-soluble polymeric protective colloids such that a content of at least 0.01% by weight, based on the weight of the suspension, of the water-soluble surfactant or natural water-soluble polymeric protective colloid selected from the group consisting of gelatin, casein albumin, starch, plant gums, water-soluble derivatives of water-insoluble natural polymeric substances, cellulose ethers, methylcellulose, hydroxyethylcellulose, carboxymethylcellulose, hydroxethylstarch and hydroxpropylguar, is adsorbed onto said particles.

Claim 12. (currently amended). The process of claim 11, wherein the aqueous medium is an acidic solution of a water-soluble calcium salt and a stoichiometric amount of a water-soluble phosphate salt with a pH below 3, and the precipitations effected by increasing the pH using aqueous alkalis or ammonia in the presence of the water-soluble surfactants or natural water-soluble polymeric protective colloids selected from the group consisting of gelatin, casein, albumin, starch, plant gums, water-soluble derivatives of water-insoluble natural polymeric substances, cellulose ethers, methylcellulose, hydroxyethylcellulose, carboxymethylcellulose, hydroxethylstarch and hydroxpropylguar.

- Claim 13. (currently amended) A toothpaste comprising one or more silica polishing agents, humectants, binders or aromas and 0.1–5% by weight of one or more calcium salts selected from the group consisting of amorphous calcium phosphate, hydroxylapatite, fluoroapatite, and calcium fluoride, said calcium salts being present in the form of a suspension of one or more of the salts in a liquid medium in which the salts are less than 1 g/l soluble, wherein the salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, stabilized against agglomeration by a content of at least 0.01% by weight, based on the weight of the suspension, of a water-soluble surfactant or of a natural water-soluble polymeric protective colloid selected from the group consisting of gelatin, casein, albumin, starch, plant gums, water-soluble derivatives of water-insoluble natural polymeric substances, cellulose ethers, methylcellulose, hydroxyethylcellulose, carboxymethylcellulose, hydroxethylstarch and hydroxpropylguar adsorbed onto said particles.
- Claim 14. (currently amended) A method of remineralizing teeth comprising the steps of applying to a tooth a remineralizing-effective amount of a suspension of one or more phosphate calcium salts, fluoride calcium salts, or fluorophosphate calcium salts in a liquid medium in which these salts are less than 1 g/l soluble, wherein the calcium salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, stabilized against agglomeration by a content of at least 0.01% by weight, based on the weight of the suspension, of a water-soluble surfactant or of a natural water-soluble protective colloid selected from the group consisting of gelatin, casein, albumin, starch, plant gums, water-soluble derivatives of water-insoluble natural polymeric substances, cellulose ethers, methylcellulose, hydroxyethylcellulose, carboxymethylcellulose, hydroxethylstarch and hydroxpropylguar adsorbed onto said particles.

- Claim 15. (new) A suspension of one or more phosphate calcium salts, fluoride calcium salts, or fluorophosphate calcium salts in a liquid medium according to claim 8, in which the salts are less than 1 g/l soluble, wherein the calcium salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, stabilized against agglomeration by a content of at least 0.01% by weight, based on the weight of the suspension, of a water-soluble surfactant or of a water-soluble gelatin adsorbed onto said particles.
- Claim 16. (new) A suspension according to claim 9, comprising 1% to 40% by weight of one or more phosphate calcium salts, fluoride calcium salts or fluorophosphate calcium salts in a liquid medium in which the salts are less than 1 g/l soluble, wherein the calcium salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, said particles stabilized against agglomeration by a content of 0.1% to 10% by weight, based on the weight of the one or more calcium salts, of a water-soluble surfactant or a water-soluble gelatin adsorbed onto said particles.
- Claim 17. (new) The suspension of claim 16, wherein the water-soluble surfactant comprises one or more non-ionic surfactants, the suspension comprising 1% to 10% by weight, based on the weight of the one or more calcium salts, of the one or more nonionic surfactants.

- Claim 18. (new) A process for the preparation of a suspension of poorly soluble calcium salts according to claim 11, comprising the steps of precipitating one or more phosphate calcium salts, fluoride calcium salts, or fluorophosphate calcium salts in an aqueous medium in which these salts are less than 1 g/l soluble, wherein the calcium salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, said precipitation being carried out in the presence of water-soluble surfactants or gelatin such that a content of at least 0.01% by weight, based on the weight of the suspension, of the water-soluble surfactant or water-soluble gelatin is adsorbed onto said particles.
- Claim 19. (new) The process of claim 18, wherein the aqueous medium is an acidic solution of a water-soluble calcium salt and a stoichiometric amount of a water-soluble phosphate salt with a pH below 3, and the precipitations effected by increasing the pH using aqueous alkalis or ammonia in the presence of the water-soluble surfactants or water-soluble gelatin.
- Claim 20. (new) A toothpaste according to claim 13, comprising one or more silica polishing agents, humectants, binders or aromas and 0.1–5% by weight of one or more calcium salts selected from the group consisting of amorphous calcium phosphate, hydroxylapatite, fluoroapatite, and calcium fluoride, said calcium salts being present in the form of a suspension of one or more of the salts in a liquid medium in which the salts are less than 1 g/l soluble, wherein the salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, stabilized against agglomeration by a content of at least 0.01% by weight, based on the weight of the suspension, of a water-soluble surfactant or of a water-soluble gelatin adsorbed onto said particles.

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Claim 21. (new) A method of remineralizing teeth according to claim 14, comprising the steps of applying to a tooth a remineralizing-effective amount of a suspension of one or more phosphate calcium salts, fluoride calcium salts, or fluorophosphate calcium salts in a liquid medium in which these salts are less than 1 g/l soluble, wherein the calcium salts comprise primary particles having diameters of from 5 to 50 nanometers and lengths of from 10 to 150 nanometers, stabilized against agglomeration by a content of at least 0.01% by weight, based on the weight of the suspension, of a water-soluble surfactant or of a water-soluble gelatin adsorbed onto said particles.